

David ATTWATER, *et al.*
Serial No. 10/500,826
August 1, 2008

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The Examiner is thanked for including a detailed “response to arguments” section in the last office action. In that response, the Examiner disagrees with applicants’ earlier arguments (see pages 16-18 of the submission filed December 10, 2007) with respect to the difference between any data storage by Coffman and applicants’ claim 1 requirement for dynamically updated storage of input and output “type” data.

While Coffman does teach dialogue management and arbitration in a multi-modal environment, the primary thrust of the teaching appears to be towards managing dialogue/arbitration between plural applications. At the same time, the applicants do recognize that Coffman teaches “another aspect” of the disclosure for multi-modal input/output management (e.g., see paragraph 22).

The Examiner refers to Coffman’s DMAF (dialogue manager and arbitrator façade) as including a mechanism for conveying application properties to the CVM (conversational virtual machine) through the DMA (dialogue manager and arbitrator). It is true that Coffman also teaches that one of these conveyed application properties is an algorithm string for input processing of user input – and that such string may somewhat be “modified.” However, the undersigned’s reading of paragraphs 60-61 does not reveal how such algorithm string is modified (or when or by what).

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The Examiner apparently recognizes this deficiency of Coffman as well because the Examiner's "response to arguments" section then goes on to assert that distribution of such application properties throughout a system "implies storing input and output type data which can be dynamically updated following every response, since the CVM instantiates and uses proper engines for processing user input when algorithm string of the user is modified."

With all due respect, it is noted that the Examiner's inference is clearly not an inherent inference. In particular, it also begs the question of how such algorithm string is modified, when it is modified, and by what mechanism it might be modified. For example, the application developer may be the source of such modifications (e.g., see paragraph 64).

In short, the undersigned has been unable to find anything in Coffman that either explicitly or inherently requires storage of input and output "type" data which is dynamically updated at the time (i.e., "when") any input/output properties change, and/or output prompts are sent, and/or input responses are received. Merely because it might be possible to modify the Coffman system to cause dynamic updating of such a memory following every response does not mean that there is any teaching or suggestion to that end in the Coffman reference. In particular, merely because the algorithm string for the

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user is employed to process user input and such can be somewhat “modified” also does not inherently imply such dynamic operational characteristics.

In any event, applicants’ claims have been further amended above in an attempt to even more clearly distinguish from Coffman.

The rejection of claims 1-11, 13-33 and 35-46 under 35 U.S.C. §102 as allegedly anticipated by Coffman ‘174 is respectfully traversed.

Claim 1 has been amended to more clearly specify that the properties (i.e., of the input and output ports and/or the input responses and output prompts communicated therethrough) comprise the utilization made of each input and output port by a user and further specify that the interactive dialogue apparatus comprises means for establishing a user preference value from said properties. Basis for such is apparent, for example, from claim 6 and page 15, lines 1-14, of the specification.

Similar amendments have been made to independent claims 2, 23 and 24.

The Examiner refers to paragraphs 60 and 61 of Coffman where reference is made to “properties” including “the resources the application needs” such as engine resources, data files and the algorithm string for input processing. Careful study of these properties indicates that none are similar to the utilization property of the present invention.

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Whereas the meanings of “engine resource” and “data file” properties appear clear, the intended meaning of the term “algorithm string” as used in Coffman is more obscure.

Coffman states that, “if the user input comprises spoken utterances (voice command), the algorithm string may comprise: front end+speech recognition+NLU [natural language understanding]. If the user input is a typed command, the algorithm string may be just NLU, etc.” From this use of the algorithm string property, it appears that Coffman uses the algorithm string to indicate the processing necessary for various forms of input received from the user. Hence, for voice input, the algorithm string indicates an appropriate process (DMA). For keyboard input, the algorithm string indicates a different DMA.

This is not the same as the arrangement proposed by the present inventors for recording the utilization patterns of a user, i.e., recording which input modes are used preferentially by a user. This leads to the conclusion that Coffman does not teach using the “properties” of the presently claimed invention so as to establish a user preference value for each port and to improve the interactive dialog presented to the user.

The inventors have provided a new capability in interactive dialogue apparatus to take account of multi-port functionality and to record a user’s implicit preference for

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input or output mode by monitoring user behavior and drawing inferences as to the user's preferred way of interacting.

Knowledge of a user's utilization preference is, advantageously, exploited to personalize the dialogue with the user so as to provide the user with a more intuitive mode of interaction. The more intuitive mode, matching the user's implicitly demonstrated preferences, will tend to reduce the likelihood of input errors on the part of the user.

For example, if it is found that motor-input (i.e., keyboard) is preferred over audio-input (even though both are supported), the unused modality could be allocated to a 'supportive' role. That is, rather than using modality-independent wordings (such as "what is your surname?") for audio output, the alternative "please enter your surname" could be used. The audio output prompt directs the caller to use their modality of choice (i.e., the keyboard). The system, as a result, has become supportive of the caller's preferred modality.

This is an area not addressed by Coffman which teaches no means to achieve the enhanced user interface provided by the applicants' now claimed apparatus and methods.

Independent claims 2, 23 and 24 include the patentably distinguishing features already discussed above.

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Given such fundamental distinction *vis-à-vis* the independent claim features already discussed, it is not believed necessary at this time to discuss additional distinguishing features of the rejected claims. Suffice it to note that, as a matter of law, it is impossible for any reference to anticipate a claim unless it teaches each and every feature of that claim.

Accordingly, this entire application is now believed to be in allowable condition, and a formal notice to that effect is respectfully solicited.

Respectfully submitted,

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